

REMARKS

The undersigned attorney wishes to thank the Examiner for the useful telephone interview on July 27, 2006. The below remarks on the prior art reflect the discussion of the prior art. Before turning to the prior art, applicants want to further address two issues raised by the Examiner during the interview.

First, applicants have confirmed that the Styroflex®BX6105 mentioned at paragraph 66 of Ouhadi et al., U.S. 2003/0083434 ("Ouhadi") is not styrene-butylene-ethylene-styrene block copolymer ("SEBS").

Second, the Examiner made reference to the language "thermoplastic vulcanizate comprising" in line 3 of claim 30 and indicated that in view of the addition of the "consisting of" language also should be changed to "consisting of". However, the thermoplastic vulcanizate made by dynamically vulcanizing ethylene-propylene-diene ("EPDM") rubber with a polyolefin can include ingredients such as cross-linking agents that aid in the dynamically vulcanization process. Applicants have cancelled composition claim 30 to make moot any ambiguity caused by the "thermoplastic vulcanizate comprising" language.

Claim 26, as amended relates to a method of making a polymeric composition. The method includes two steps. The first step is dynamically vulcanizing a cross-linkable EPDM rubber in a polyolefin to provide a thermoplastic vulcanizate. The step does not exclude the use of, for example, cross-linking agents in the process, but the specific product of this step is a thermoplastic vulcanizate. The second step is to combine that thermoplastic vulcanizate with components consisting of SEBS and, optionally, mineral oil. The "consisting of" limitation requires that the thermoplastic vulcanizate prepared in the first step be combined with only SEBS and, optionally, mineral oil. Combining the thermoplastic vulcanizate with the SEBS, the mineral oil (optionally), and an additional component is not covered by the claims.

Claim 45 adds the melt blending requirement that prior to this amendment was present in claim 26.

Claim 26 prior to this amendment, were rejected under 35 U.S.C. § 102(a), 35 U.S.C. § 102(e), and/or 35 U.S.C. § 103(a) in view of three alternative references -- Kinoshita et al., U.S. Pat. 6, 653,401 ("Kinoshita"), Petrakis et al., U.S. Pat. 5,824,400 ("Petrakis"), and Ouhadi.. But

the method covered by claim 26, , is much different from the methods disclosed in Kinoshita, Petrakis, and Ouhadi.

Kinoshita discloses a polymer composition made by combining three components.

Kinoshita refers to these components as Components A, B, and C. Component B can be a thermoplastic elastomer composition including EPDM and a polyolefin. Component C can be a styrenic block copolymer. Applicants will focus on Component A. Component A is a polystyrene resin that is either a polystyrene homopolymer or a polystyrene copolymer made from styrene and other monomers. It is not styrenic block copolymer and is certainly not a styrene-ethylene-butylene-styrene block copolymer. See col. 2, lines 39-43. Kinoshita says that Component A is "essential". See col. 7, lines 6-10.

Claim 26 requires that the thermoplastic vulcanize be combined with only SEBS and, optionally, mineral oil. Kinoshita does not disclose or suggest such a method because the thermoplastic vulcanize disclosed by Kinoshita includes a further component -- Component A, the polystyrene resin. According to Kinoshita, the polystyrene resin is essential. Thus, the method described by Kinoshita is specifically excluded from claim 26 because of the "consisting of" clause.

Applicants also note that claim 40 requires that mineral oil is combined with the thermoplastic vulcanize. Kinoshita does not appear to describe combining the thermoplastic vulcanize with the mineral oil.

Petrakis discloses plastic articles formed from foamed thermoplastic vulcanizates. Petrakis discloses combining the thermoplastic vulcanize with a foaming agent. Thus, Petrakis' method is specifically excluded from claim 26 because of the "consisting of" clause. Moreover, Petrakis does not teach combining mineral oil with the thermoplastic vulcanize, as required by claim 40.

Ouhadi discloses making a polymer composition that includes a thermoplastic vulcanize including EPDM in a polyolefin and a styrenic block copolymer. However, the block copolymer is in a special block copolymer (see ¶¶ 10 and 13) and is not styrene-ethylene-butylene-styrene block copolymer. Ouhadi later mentions styrene-ethylene-butylene-styrene block copolymer, in passing, as an optional ingredient (as a thermoplastic elastomer), but any polymer composition made by Ouhadi also would include Ouhadi's special block copolymer.

Thus, Ouhadi's method is specifically excluded from claim 26 because of the "consisting of" clause. Moreover, Ouhadi does not teach combining the mineral oil with the thermoplastic vulcanizate, as required by claim 40.

Claim 30, which has been cancelled, was rejected under 35 U.S.C. § 102(a or e) or, alternatively, under 35 U.S.C. § 103(a) in view of Sakaki et al., U.S. Pat. 6,723,776 (or its EP counterpart) ("Sakaki"). Although claim 26 was not rejected in view of Sakaki, applicants note that Sakaki is remote from claim 26 for a number of reasons. In particular, Sakaki discloses conducting dynamic vulcanization with all of the ingredients of the final polymer composition pre-mixed. See col. 10, lines 51-56 and the subsequent Examples. Thus, Sakaki cooks everything in one step, the dynamic vulcanization, whereas claim 26 requires combining a previously prepared dynamic vulcanization with SEBS and, optionally, mineral oil. This is a much different process.

During the interview, in the context of claim 30, the undersigned attorney and the Examiner discussed potentially adding an upper limit on the quantity of the optional mineral oil to the claim to differentiate the large quantity of softening agent used by Sakaki. Applicants have done this in new dependent claim 42 (see page 2 for support). But applicants do not believe this upper limit is needed in claim 26 to distinguish Sakaki for the reasons discussed above, and also because Sakaki does not teach using mineral oil as the softening agent.

Applicants submit that the claims are in condition for allowance and such action is requested.

Enclosed is a \$450.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

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Respectfully submitted,

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